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JUL 05 2005

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ofir Shalvi et al.  
Serial No.: 09/493,526  
Filed: 1/28/2000  
Art Unit: 2631  
Examiner: J. Corrielus  
Docket No.: TI-30149  
Conf. No.: 2369  
Customer No.: 23494

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**FACSIMILE COVER SHEET**

<input checked="" type="checkbox"/> <b>FACSIMILE COVER SHEET (1 SHEET)</b>		<input type="checkbox"/> <b>AMENDMENT</b>	
<input type="checkbox"/> <b>NEW APPLICATION</b>		<input type="checkbox"/> <b>EOT</b>	
<input type="checkbox"/> <b>DECLARATION</b>		<input type="checkbox"/> <b>NOTICE OF APPEAL</b>	
<input type="checkbox"/> <b>ASSIGNMENT</b>		<input checked="" type="checkbox"/> <b>APPEAL</b> <u>SUPPL BRIEF (4 Pages)</u>	
<input type="checkbox"/> <b>FORMAL DRAWINGS</b>		<input type="checkbox"/> <b>ISSUE FEE</b>	
<input type="checkbox"/> <b>INFORMAL DRAWINGS</b>		<input type="checkbox"/> <b>REPLY BRIEF (IN TRIPLICATE)</b>	
<input type="checkbox"/> <b>CONTINUATION APP'N</b>		<input checked="" type="checkbox"/> <b>Request to Reinstate Appeal</b>	
<input type="checkbox"/> <b>DIVISIONAL APP'N</b>			
NAME OF INVENTOR(S): Ofir Shalvi et al.		RECEIPT DATE & SERIAL NO.: Serial No.: <b>09/493,526</b>	
TITLE OF INVENTION: Method for Combating Ingress and Impulse Noise Using Coded Modulation		Filing Date: <b>1/28/2000</b>	
TI FILE NO.: <b>TI-30149</b>	DEPOSIT ACCT. NO.: <b>20-0668</b>	Conf. No.: <b>2369</b>	
FAXED: <b>07/05/2005</b>			
DUE: <b>07/05/2005</b>			
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Texas Instruments Incorporated  
PO Box 655474, M/S 3999  
Dallas, TX 75265

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl.No.: 09/493,526  
Applicant: Shalvi et al  
Filed: January 28, 2000  
TC/AU: 2631  
Examiner: Corrielus

Confirmation No.: 2369

Docket: TI-30149  
Cust.No.: 23494

## REQUEST TO REINSTATE APPEAL


Commissioner for Patents  
P.O.Box 1450  
Alexandria VA 22313-1450

Sir:

Pursuant to Rule 193(b)(2)(ii) applicants request reinstatement of the appeal in this application; a supplemental appeal brief is enclosed.

The original notice of appeal was filed 11/08/2004 and the original appeal brief was filed 01/26/2005. Prosecution was reopened with the final rejection mailed 04/05/2005. The Commissioner is hereby authorized to charge any necessary fees to the deposit account of Texas Instruments Incorporated, account No. 20-0668

Respectfully submitted,



Carlton H. Hoel  
Reg. No. 29,934  
Texas Instruments Incorporated  
PO Box 655474, M/S 3999  
Dallas, Texas 75265  
972.917.4365

JUL 05 2005

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appl.No.: 09/493,526  
Appellant: Shalvi et al  
Filed: January 28, 2000  
TC/AU: 2631  
Examiner: Corrielus

Confirmation No.: 2369

Docket: TI-30149  
Cust.No.: 23494

**APPELLANTS' SUPPLEMENTAL BRIEF**

Commissioner for Patents  
P.O.Box 1450  
Alexandria VA 22313-1450

Sir:

The attached sheets contain the Rule 41.37 items of appellants' supplemental brief. The fee for filing a brief in support of the appeal has already been paid. The Commissioner is hereby authorized to charge any other necessary fees to the deposit account of Texas Instruments Incorporated, account No. 20-0668.

Respectfully submitted,



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972.917.4365

**Rule 41.37(c)(1)(i) Real party of interest**

Texas Instruments Incorporated owns the application.

**Rule 41.37(c)(1)(ii) Related appeals and interferences**

There are no related dispositive appeals or interferences.

**Rule 41.37(c)(1)(iii) Status of claims**

Claims 1-3 and 5 are pending in the application with claim 5 allowed and claims 1-3 finally rejected. This appeal involves the finally rejected claims.

**Rule 41.37(c)(1)(iv) Status of amendments**

There is no amendment after final rejection.

**Rule 41.37(c)(1)(v) Summary of claimed subject matter**

The invention provides a method of coding for upstream transmission in a digital cable system. Application page 4, lines 4-21 describes the coding. And application page 5, line 22 to page 6, line 21 plus Fig.3 illustrate a bit-wise scoring for soft (Viterbi-type) decoding.

**Rule 41.37(c)(1)(vi) Grounds of rejection to be reviewed on appeal**

The grounds of rejection to be reviewed on appeal are:

(1) claims 1-3 were rejected as anticipated by the Vijayan reference.

**Rule 41.37(c)(1)(vii) Arguments**

(1) Claims 1-3 were rejected as anticipated by Vijayan; the Examiner pointed to Vijayan Figs.2-3.

Appellants reply that claims 1-3 are limited to coding for upstream transmission in a cable system. In contrast, Vijayan applies to a wireless (air interface) system; see Vijayan column 4, lines 5-21. Because the problems that coding are to overcome for an upstream in a cable system differ from the problems of wireless systems, Vijayan does not anticipate claims 1-3. In

particular, the coding in Vijayan is to counter multipath fading problems of wireless systems; whereas, a cable system has no fading problems but rather impulse and burst noise problems; see Vijayan, column 2, lines 36-41 and the bottom two paragraphs of application page 1.

**Rule 41.37(c)(1)(viii) Claims appendix**

1. An encoder for a CATV upstream data channel transmitter, comprising:
  - a convolutional encoder for receiving data values, said convolutional encoder concatenated with an outer Reed-Solomon encoder;
  - a bit interleaver interconnected with said convolutional encoder; and
  - a symbol mapper interconnected with said bit-interleaver.
2. The encoder of claim 1, wherein said symbol mapper is a QAM mapper.
3. A system which comprises:
  - an encoder for a CATV upstream data channel transmitter, comprising:
    - a convolutional encoder for receiving data values, said convolutional encoder concatenated with an outer Reed-Solomon encoder;
    - a bit interleaver interconnected with said convolutional encoder; and
    - a symbol mapper interconnected with said bit interleaver; and
  - a bit-interleaved decoder for a CATV upstream channel receiver, comprising:
    - a scorer for receiving symbols;
    - a bit de-interleaver interconnected with said scorer; and
    - a convolutional decoder interconnected with said bit de-interleaver.

**Rule 41.37(c)(1)(ix) Evidence appendix**

N/A

**Rule 41.37(c)(1)(x) Related proceedings appendix**

N/A